

**MATRIX OF ICT OPPORTUNITIES
FOR USAID/BEIRUT MISSION**

**PRESENTED TO USAID/BEIRUT
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INTRODUCTION

The opportunities and challenges to the Lebanese IT sector remain consistent with the survey completed last year. Simply put, if the government can limit its role in the telecom sector, focus on liberalization and transparency, the educated and entrepreneurial Lebanese private sector will respond and invest in the sector, creating jobs and stimulating the economy. In addition to the benefits that would be gained through increased economic growth, USAID can assist the private sector implement socially responsible programs fulfilling USAID's broader mandate for rural and social development.

Through the optic of using Information Technologies (IT) to enhance: (a) economic growth and (b) rural and social development, the USAID ANE IT Coordinator visited Lebanon for four days in October to meet with the Government of Lebanon (GoL), Lebanese and international private sector entrepreneurs, Non-Governmental Organizations (NGOs), and IT trade associations. Purpose of the TDY was to assist the USAID Mission to Lebanon outlining immediate program development options. Guiding the October visit was an earlier visit by the author in March of 2001 and a thorough analysis of the IT sector completed by Stanford Research Institute (SRI) in February of 2002.

With the focus on using the results from the SRI study, the author distributed the SRI report recommendations section (the study had not been distributed to most development partners), and discussed the recommendation section with Lebanese counterparts. As a result, feedback was compiled and a matrix was developed of activities that could be quickly implemented by USAID and Lebanese counterparts, focusing both on Economic Growth as well as on Rural and Social Development.

The new 2003-2005 Mission Strategy explicitly states that IT is an integral cross-cutting tool to achieve overall Mission objectives. Focusing on what kind of activities that could be covered, one must mention that the USAID Mission is still operating under a constrained environment of limited personnel, limited access by USAID partners to the USAID office while the Mission is managing an unbelievable 1,300 grants/activities. As a result of the need to focus on the near term, not all of the SRI recommendations are covered in this matrix and the eighteen that are listed here, are endorsed by the author.

MATRIX REVIEW

The matrix is broken up into four sections, (a) Big Picture, (b) Policy Reform, (c) Private Sector Entrepreneurship, and (d) People & Applications.

- **Big Picture:** Covers overarching themes ranging from a national IT master plan to ensuring the private sector has a greater role, unencumbered by regulation, in driving the IT marketplace.

- **Policy Reform:** Promotes policy reform to permit the introduction and growth of information and communication technologies, reducing barriers to open connectivity, and ensuring that global electronic commerce can take place in an open and transparent fashion.
- **Private Sector:** Ensures the private sector “can do what it needs to do to be successful.” This entails combining “Policy” reform with providing access on an universal and affordable basis while ensuring there are sufficient, well trained technicians to support the build-out of ICT industries. Lebanon, with the widest talent base of perhaps any ANE country, should clearly be far ahead of every country in the region.
- **People & Applications:** Uses new approaches to sustainable social and economic development through Information and Communication Technology tools. It is critical to the success of the program that USAID/Lebanon’s partners use the Internet and other ICTs as tools for development, particularly in the rural areas.

Putting these four elements into the context of Lebanon, several items are important: to reference:

- I.T. is **not the “silver bullet”** to solve all of the countries economic or social problems, however, it is a very good tool if properly used.
- The matrix identifies activities that can be achieved in the **short to medium term**. This is not to say that long-term investment isn't worthwhile to start (and start early), but that by addressing short to medium term constraints, Lebanon can make significant progress which influences investors and enhances growth.
- USAID has **limited personnel**, so the best activities to support are high impact, low management intensive. As time and management load is limited, it is best to concentrate on immediate (short-term, medium-term) targets.
- **Not all of the SRI recommendations were included.** Some were excluded based on time available during the TDY, others based on long-term ability for USAID/Lebanese partners to complete. This does not mean that the recommendations not included were bad recommendations, just long-term recommendations that might not be possible without significant political will and capital investment, were left for others to discuss. A couple of quick “home-runs” would do wonders in the marketplace while concentrating on medium to long-term objectives.

POTENTIAL AREAS OF ACTIVITY INVESTMENT BY USAID TO FACILITATE ECONOMIC GROWTH AND SOCIAL BENEFIT BY THE WIDEST NUMBER OF LEBANESE

| ACTIVITY | BENEFITS | CHALLENGES | ACTORS * |
|--|--|--|---|
| BIG PICTURE | | | |
| 1. National ICT Steering Committee & Action Plan. Initial meeting scheduled for October 22 nd | <ul style="list-style-type: none"> • Office of the PM has requested USAID consultant to assist with process • Creates vision from national perspective • Builds support at the top level | <ul style="list-style-type: none"> • Fear that this will become another document to sit on shelf or committee will suffer from 'political' inertia • Expand private sector inclusion in the process • Should USAID supply consultant to assist in Action Plan process, believe (a) long-term support required and (b) support should be tied to reform • Without vision, can one say Lebanon is "open for business"? | <ul style="list-style-type: none"> • Private sector must drive the process, through individuals, companies and associations. • Government to include OMSAR, IDAL, MPT, and Office of the PM. • Educational institutions such as AUB and LAU to provide intellectual capacity and 'neutral' recommendations |
| 2. Reduce role of government | <ul style="list-style-type: none"> • Allows the private to do "want it needs to," unimpeded by bureaucracy and politics • An expanded private sector increases private sector investment and grows tax base while increasing employment reducing the 'brain-drain' | <ul style="list-style-type: none"> • Must find solutions inoffensive to government that liberalize sector, particularly when government or powerful individuals believe in short-term approach of capturing a larger tax base rather than let sector expand • Lebanon is a complicated political equation that struggles under the burden of balancing politics with many activities undertaken by the government | <ul style="list-style-type: none"> • Work with Parliament to reduce outside influence • Lobbying should be done by Private sector through individuals, companies and associations |
| 3. Distribute SRI | <ul style="list-style-type: none"> • Such a survey, | <ul style="list-style-type: none"> • No one had seen a | <ul style="list-style-type: none"> • SRI, |

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| IT paper | with recommendations, helps to provide framework for National IT Strategy | <p>copy of the study. (Most pleasantly surprised to see that such a study was done).</p> <ul style="list-style-type: none"> • Study is thorough, but targets particular institutions rather than being institution neutral • Include date and author of study when released | <ul style="list-style-type: none"> • USAID, • Associations, • GoL (Government of Lebanon) |
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| ACTIVITY | BENEFITS | CHALLENGES | ACTORS * |
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| POLICY REFORM | | | |
| 4. Pricing liberalization on bandwidth | <ul style="list-style-type: none"> • Internet usage by companies and institutions is low because of extraordinarily high pricing and lack of delivery. Thus pricing reform will help everyone • Pricing liberalization allows multiple bandwidth providers to compete on an unrestricted basis. • Promotes use of new technologies that shouldn't be licensed by government. | <ul style="list-style-type: none"> • Government slow to recognize that bandwidth reform is a national priority and should completely liberalize sector • Present inability to get leased lines (legally) in the quantity required • Broadband access is oversubscribed, meaning users get ½ of what they pay for • Illegal cable bandwidth supplying ½ of marketplace, indicating several problem in marketplace | <ul style="list-style-type: none"> • MPT • Office of PM • Parliament • Bandwidth providers |
| 5. Pricing liberalization on dial-up connectivity | <ul style="list-style-type: none"> • Liberalization of pricing about to cut costs by 75% | <ul style="list-style-type: none"> • Taking nine (or more) months to process new pricing • Individuals presently limiting access to Internet because of very high dial-in charges • After pricing reform, costs will still be higher than other countries in region | <ul style="list-style-type: none"> • MPT • Office of PM • Parliament |
| 6. Write Telecom Law Decrees | <ul style="list-style-type: none"> • Lebanon recently went through a thorough analysis of its telecom laws and passed the new, up-to-date legislation | <ul style="list-style-type: none"> • The law will not be implemented until decrees are written | <ul style="list-style-type: none"> • Telecom lawyers, both internationally and locally based |
| 7. Support the establishment | <ul style="list-style-type: none"> • Would balance the political process of | <ul style="list-style-type: none"> • Must be independent from | <ul style="list-style-type: none"> • MPT |

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| of an Independent Regulatory Authority (IRA) | licensing, liberalization, etc | <p>political interference.</p> <ul style="list-style-type: none"> • It is possible that an “IRA” would be formed, but staffed with political choices mitigating utility of such an organization or choices would be anti-liberalization • Likely not to happen until mobile dispute is resolved | <ul style="list-style-type: none"> • Associations • University support (Universities offer the hope of being neutral from political influence) |
| 8. Intellectual Property Rights - IPR - legislation and enforcement | <ul style="list-style-type: none"> • IPR enforcement important for domestic software industry as well as international investors • IPR enforcement important for WTO accession • One interviewee asked for WIPO protection for Lebanese domestically produced software | <ul style="list-style-type: none"> • Presently, there is virtually no enforcement and Lebanon is seen as one of the leading software pirates in the world • Present industry calculation of piracy based on number of CPUs imported but does not factor in CPUs exported (in finished products such as PCs). Figure locally indicates 79% piracy | <ul style="list-style-type: none"> • GoL • Companies refusing to sell pirated software • Analysis to determine if calculation of piracy is accurate • Team working on WTO accession • WIPO - World Intellectual Property Organization • Associations |

| ACTIVITY | BENEFITS | CHALLENGES | ACTORS * |
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| POLICY REFORM | | | |
| 9. Send delegation to USAID/ANE sponsored Cybercrime workshop (tentatively slated for March, 2003) | <ul style="list-style-type: none"> • Cybercrime is not only domestically destructive, but can be damaging to international reputation if Lebanon is point of origin of cybercrime | <ul style="list-style-type: none"> • Workshop is just first step - must be followed up with concrete action ranging from legislation to support for investigative units | <ul style="list-style-type: none"> • GoL • Associations • Lawyers • IT Companies |
| 10. end delegation to USAID/ANE sponsored Trade Agreement & Telecom Policy Reform Workshop (tentatively slated for Summer, 2003) | <ul style="list-style-type: none"> • Provides foundation for intersection of WTO accession and the need for telecom policy reform | <ul style="list-style-type: none"> • Workshop is just first step - must be followed up with concrete action in-line with USAID's and GoL's broader goals of WTO accession | <ul style="list-style-type: none"> • GoL • Associations • Lawyers • IT Companies |

| ACTIVITY | BENEFITS | CHALLENGES | ACTORS * |
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| PRIVATE SECTOR DEVELOPMENT | | | |
| 11. Address investment and privatization "image problem" | <ul style="list-style-type: none"> Lebanon has the one of the most successful diaspora communities anywhere in the world - it should capitalize on them Outside investment, coupled with policy reform, can create economic growth and jobs | <ul style="list-style-type: none"> Problems with very large sector drivers ranging from the termination of the mobile licenses, problems with the port project, airport project, and postal project, send a bad message to international investors | <ul style="list-style-type: none"> GoL. While it is tempting to include others in this box, the strongest signal that can be sent to the global marketplace is through government transparency and liberalization |
| 12. Broad-based Association Support | <ul style="list-style-type: none"> Associations are one of the primary policy liberalization advocates in the country Strengthens the private sector to become more engaged | <ul style="list-style-type: none"> There are several associations in Lebanon that are providing instrumental reform. A coalition should be formed between old established organizations with proven track records to newly established organizations covering niche areas. Critical to allow individuals to join at nominal fees | <ul style="list-style-type: none"> Professional Computer Association (PCA) American Chamber of Commerce (AmCham) International Chamber of Commerce Association of Lebanese Software Industry (ALSI) Lebanese Businessmen's Association (RDCL) |
| 13. Support targeted statistic gathering | <ul style="list-style-type: none"> One can determine the size of the sector, improve planning, marketing, and investments with reliable statistics | <ul style="list-style-type: none"> Because of the uniqueness of Lebanon, statistics of the IT sector are limited People/firms are reluctant to provide concrete statistics. Must be gathered in a way where statistics reported are <i>collectively, not</i> | <ul style="list-style-type: none"> Associations |

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| | | <i>individually</i> <ul style="list-style-type: none"> • Statistic gathering would be starting from scratch | |
| 14. Software development certification support | <ul style="list-style-type: none"> • Software companies, if unknown in the international marketplace, are helped by having internationally recognized certification such as ISO 9001 and CMM | <ul style="list-style-type: none"> • Must be done to support all companies rather than favoring individual requests | <ul style="list-style-type: none"> • ALSI • PCA |
| 15. end delegation to USAID/ANE sponsored ICT Competitiveness Workshop (Fall 2003) | <ul style="list-style-type: none"> • Competitiveness combines the need for broad-based telecom policy reform supporting private sector entrepreneurship • Fits in with Mission focus on cluster support | <ul style="list-style-type: none"> • Government and private sector must work together effectively; traditionally this has not happened in Lebanon • Lebanon must play a regional “catch-up” to other countries in region | <ul style="list-style-type: none"> • GoL • Associations • Lawyers • IT Companies |

| ACTIVITY | BENEFITS | CHALLENGES | ACTORS * |
|---|---|---|--|
| PEOPLE AND APPLICATIONS | | | |
| 16. conduct Telecenter analysis. (See additional telecenter comments below in separate section) | <ul style="list-style-type: none"> • Telecenters are important vehicles to keep rural communities connected to (a) the world, (b) the Lebanese diaspora, and (c) educational opportunities. Regarding education - New Horizon's training institute pointed out that as education is a way out of poverty, cybercafes could play an important role in delivering cost-effective education to rural areas. | <ul style="list-style-type: none"> • Donors are putting in telecenters that compete with private sector led telecenters • Awareness raising pilots are important, but without follow-up (e.g. a permanent telecenter) leave communities frustrated • Internet access through rural telecenters is being implemented through a variety of schemes. Limited analysis of (a) what is effective and (b) what is appropriate for donors to do (vis-à-vis private sector led investment) can lead to duplication and waste | <ul style="list-style-type: none"> • Donor community • Telecenters |
| 17. conduct study of Internet in rural schools | <ul style="list-style-type: none"> • Internet in schools provide the next generation with the basic building blocks for today and tomorrow | <ul style="list-style-type: none"> • Must provide training for teachers • Must provide adequate number of computers • Must provide high-speed bandwidth, often not available in rural parts • Must provide technical support • Must provide a curriculum for use | <ul style="list-style-type: none"> • MoE • Bahiyya Al-Hariri • Educational institutions ranging from private sector educational companies to the main universities and training academies |
| 18. Continue transparency in government through | <ul style="list-style-type: none"> • Present challenging operating environment due | <ul style="list-style-type: none"> • Those in positions of power, ranging from petty corrupt clerk to senior level | <ul style="list-style-type: none"> • GoL • OMSAR • NGOs targeting reform |

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| applications | <p>to corruption to political intrigue.</p> <ul style="list-style-type: none"> • Transparency will increase national and local investment, tax collection, and will facilitate business • Activities range from activities at the municipal level to existing government efforts to improve transparency through e-government. (A good example is OMSAR's 1,700 gov. forms on-line - with gov. services to follow) | government, will lose their personnel incentive for change | reform |
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* The list of "actors" is likely incomplete and necessitates additions

Hi-Tech Park and Telecenter Support

Two additional activities are worth mentioning in a separate section: (a) Supporting a Hi-Tech Park and (b) Continuing Telecenter Support.

Hi-Tech Park Support

Of the eighteen recommendations in the matrix, all are endorsed by the author. While the Beirut Emerging Technology Zone - BETZ - was discussed several times by different people, but not endorsed by the author, the author felt compelled to mention in a different section.

Based on the two visits to Lebanon, it is not clear that a hi-tech park will dramatically change the IT business climate. The private sector is able to get office space (there is, in fact, a glut) that meets their specialized needs. Private sector firms can get access to items that it needs, whether it is electricity, bandwidth (on a legal or illegal basis), storage, ports, etc. What would really help the private sector is a liberalized environment. The author understands that non-endorsement of the BETZ is likely to be an unpopular recommendation. It is feared that if a lot of money, time, political energy is put into the creation of a BETZ, this will only serve as a distraction to the root causes of the problems experienced by the private sector. In the format of the matrix approach:

| ACTIVITY | BENEFITS | CHALLENGES | ACTORS * |
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| Determine if support for BETZ - Beirut Emerging Technology Zone - warrants support | <ul style="list-style-type: none"> • Technology parks are useful when private sector constrained by lack of (a) available or affordable office space, (b) specialized office requirements, (c) access to research institutions and projects, (d) supportive environment such as electricity, bandwidth, port access, storage, etc. | <ul style="list-style-type: none"> • The approach of "build it and they will come" does not always work if not based on a sound need (as shown to left) • An hi-tech park does not create a conducive policy environment so the park will not solve the present political problems • USTDA study criticized by several private sector entrepreneurs • <i>This activity not endorsed by the author</i> | <ul style="list-style-type: none"> • USTDA (did original study), • GoL, • Private sector (through surveys) • New contractor |

Telecenter Day-Trip and Recommendations

During the brief matrix-oriented TDY, it was clear that USAID and others have made considerable efforts to expand the I.T. user-base by establishing and/or improving

access in secondary and tertiary towns and villages. On Saturday October 12th, the author visited three telecenters South of Beirut. The telecenters were established by and/or through three organizations: (a) Professional Computer Association, (b) YMCA (through USAID), and (c) CHF (through USAID). The author wishes to express sincere thanks to individuals at those three organizations, USAID, and the communities for making time available on a Saturday to discuss their telecenters. The following are observations regarding the three telecenters with conclusions and recommendations that follow:

A. Professional Computer Association - Damour

Location: PCA's telecenter program, called PiPOP, has recently established a new center in the town of Damour. Population between 25,000-40,000 and is thirty minutes South of Beirut.

Purpose: Telecenter designed to serve Schools and the Community

Established: Summer 2002

Cost: \$10,000 to establish. Users pay 1,000 L an hour. (For readers outside Lebanon, 1,500 Lebanese Pounds, also known as Lira, to the US\$1).

Cost-Share: Municipality covers dial-up line charges and gave space for free

Hours: The center is open eight hours a day, and receives most visitors at night

Users: On average, twenty users per day

Competition: Commercial telecenter a few doors away and a second commercial center also in village

Differentiating Factor: They want to serve schools, use filtering software (commercial competition a few doors away does not), and they are not designed as a good place to "meet girls" (again, like the commercial competition, according to the PiPOP operators).

Local Schools: Some have PCs, but if they do, likely not to have Internet connection.

School kids will come to the center starting in First Grade

Quote: "We want to be connected to the rest of the world"

B. YMCA - Kfeir

Location: 2,000 permanent residents, 4,500 in summer. Kfeir is on border with Syria and Israel

Purpose: Serve the Schools and the Village

Established: October, 2002

Cost: \$10,000 to establish. Users pay 4,000 L an hour for Internet access *, 250 L to print/page, 1,000 L/scan, 1,000 L an hour for computer (non-Internet) use. * = user fees/hour will drop when the phone company reduces its dial-up charges (expected to be 75% reduction in price by the PT&T)

Cost-Share: Secure space, four rotating staff, and phone line (that the phone company needed to string special for this center. Expect this is common in small villages, thus political support required).

Hours: 5-8 PM for the village, schools will use in the off-hours. (Note: village has periodic power failure)

Users: Just established a week earlier - was going to be officially launched that evening. No data as yet.

Competition: None

Differentiating Factor: Not Applicable

Local Schools: Expected to participate in program, in the off-hours. There were two schools in the community, covering all-grades. Both had "old" computers without Internet so schools expected to come to the community Telecenter for training and access.

Quote: "We will advertise on local TV and with signs. We will encourage other villages and schools without Internet to come to our center."

C. CHF - Baalbeck

Location: Located in the city of Baalbeck, eastern Lebanon, with population of 100,000. Located in an NGO, Lebanese Association for Studies and Training

Purpose: For the serious student as well as for schools

Established: October 25, 2002

Cost: \$10,000. Through e-cards, students charged 5,000 L for 7 hours, 10,000 L for 15 hours. Non-students will be charged 15,000 L for 15 hours

Cost-Share: Facility, electricity and line charges

Hours: Target group will be 10AM-4PM for tourists, 5-11PM for public and schools

Users: Has not been launched so no statistics. See note below under Differentiating Factor

Competition: Ten or more telecenters in town.

Differentiating Factor: Not designed for "chat" mode nor will e-games be allowed. They have applied for a leased-line. On the weekend, they will use center for training.

Local Schools: About fifty percent of local schools have computers, but none have Internet. They only teach how to use computers.

Quote: "Plan on being sustainable because the operating organization's (Lebanese Assn. for Studies and Training) 100 members will use the center. Our families will also use as we are cheaper than having at home"

D. Conclusions

Overall: Regardless of location, the three telecenters were surprisingly similar

Location: All the locations reviewed were dramatically different, ranging from village of 2,000 to one of Lebanon's largest cities of 100,000 people

Purpose: All three centers wanted to serve students, as well as the community. They viewed themselves as being different from commercial cybercafes.

Established: All centers were new, indicating that telecenter support is now very popular with donors and communities.

Cost: Average cost was \$10,000. Most institutions wanted to charge rates on par, or less, than commercial centers. (One way this is possible is that the computers and training was free).

Cost-Share: All counterparts provided a secure facility for free. They also covered the cost of the line (dial-up or leased).

Hours: All saw their primary hours from the late afternoon to early evening. For tiny villages like Kfeir, hours have to be limited because population base cannot support all-day usage

Users: All were too new so there weren't reliable statistics

Competition: Other than Kfeir, others had competition.

Differentiating Factor: All centers tried to differentiate themselves from other places by making it school friendly, community friendly, and did not want the commercial aspects of centers (such as unfiltered access, games, chat, not to mention, socialization by the users as the primary reason for using the center)

Local Schools: All wanted the local schools to use the center, particularly as the schools do not have Internet access (if they have computers at all).

E. Recommendations

1. Expert: If USAID continues to support telecenters, it is recommended to bring out a telecenter expert to provide lessons learned and best practices from other countries.

2. Too Diverse: USAID appears to have supported a few telecenters by multiple associations. It is recommended to have more associations by fewer institutions, to facilitate the 'production-line' approach to establishing, supporting, training, etc.

3. Telecenter Management: It is recommended that USAID provide training on optimal ways of managing cybercafes.

4. Competition: USAID and its partners (and other donors) should analyze effect that a donor driver telecenter has on private sector led telecenters. It is recommended to be cautious that donor supplied telecenters (free PCs, training, software, etc.) does not drive out private sector investment.

5. Cost-Share: The local communities were willing to do the cost-sharing arrangement. Aside from the competition recommendation above, cost-sharing is recommended for all future telecenter arrangements.

6. Lines Charges: Both dial-up and leased-line charges are quite high in Lebanon. While both are expected to fall in the near future, it is clear that the lack of cost-based-tariffing models by the PT&T negatively affects the users (or potential users) of telecenters. It is recommended that telecenters explore options to limit line charges while maximizing user-time. For example, Baalbeck telecenter is trying to pay for leased-line access *only* when the center is open, thus limiting expenses. The village of Kfeir will run into different problems with only one dial-up line. This line is to be shared with multiple users. If there is only one user - or five users - they still have to pay the same amount for the line. However, the more users they add using the one line, the slower the line is for everyone in the group. As a result, they may not have enough capacity to serve all users well. This creates a quandary - having only one users costs a lot because there is no cost-sharing of the line charges. Having too many users defeats the purpose because the capacity is diluted making web browsing useless.

7. Differentiation & Schools: All the telecenters tried to differentiate themselves from commercial centers by the fact that they serve schools and they do allow/encourage their clients to engage in "chat" or play e-games. It is recommended that USAID bring out a telecenter school training specialist if the Mission is serious about having schools uses telecenters as teaching tools.

8. Education: New Horizon's training institute pointed out that as education is a way out of poverty, cybercafes could play an important role in delivering cost-effective education to rural areas. The challenge will be how to conduct a cost-effectively training program, ideally managed by the private sector, on thin-band (dial-up connectivity).

SUMMARY

USAID has done an excellent job over the past year to start using IT as a tool for development.

(a) It has prepared the excellent three-year strategy, embedding IT as a cornerstone of economic growth (vertical approach) and as a cross-cutting theme for development (horizontal approach).

(b) The annual budget will be \$35Million per year/ for three years. Hence, based on the vertical and horizontal approaches, it is reasonable that the cumulative amount going into IT will exceed \$10Million, assuming success can be proven.

(c) It has hired a full-time IT coordinator, Ms. Zeina Farhat, so that the Mission can closely manage activities in the IT arena, and

(d) It had one of its prime contractors, SRI, conduct a thorough IT sector analysis, so project development can begin immediately.

Based on these four areas, USAID/Lebanon is ideally suited, from an internal perspective, to utilize IT as a driver of economic growth as well as rural and social development. Using the matrix provided, the Mission can continue and expand its excellent efforts to use IT to assist Lebanon on the road to robust growth.

The following are three sets of contacts comprising two TDYs (March 01 and October 02) and the list of Lebanese delegates to the USAID MENA Regional Telecom Policy Workshop (April 2002). It is hoped that these lists can guide future consultations by other USAID partners.

| Annex A.1: Lebanese Contacts during Metzger TDY October, 2002 | |
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| Organization | Contact |
| AbouSleiman & Partners Law Office | Tarek Mogharbel, Lawyer, member of the team advising Lebanon's Higher Council for Privatization Tel: (961-1) 987-733. Email: tmogharbel@hotmail.com |
| Alem & Associates Law Firm | Mohamed Alem, Senior Legal Council to Ministry of Telecom Tel: (961-1) 818-191. Email: malem@alemlaw.com |
| ALSI - Association of Lebanese Software Industry (some members listed under their companies) | Patrick Frick, CEO Tel: (961-3) 906-422. Email: patrick.frick@alsilebanon.org www.alsilebanon.org |
| American Lebanese Chamber of Commerce - AmCham | Salim Zeenni, President Me Ahdallah Basbous, Legal Advisor Marie Kortbawi, Office Manager Tel: (961-1) 985-330. Email: amchamlb@cyberia.net.lb |
| American University Beirut - AUB (Smart Bus and E-Commerce) | Tony Feghali, Assistant Professor Cell: (961-3) 343-376. Email: feghali@aub.edu.lb |
| Anzima (ALSI Member) | Fares Kobeissi, General Manager Tel: (961-1) 701-702. Email: fares.kobeissi@anzima.com.lb |
| Astrolabe IT (ALSI Member) | Ali Shamseddine, Chairman Tel: (961-1) 611-850. Email: ali.shamseddine@astrolabeit.com www.astrolabeit.com |
| Automated Information Management Systems - AIMS (AmCham Member) | Rodrigue Zablith, General Manager Tel: (961-9) 636-985. Email: aims@aims-co.com www.aims-co.com |
| Automation and Computer Technology - ACT (PCA Member) | Jalal Fawaz, Managing Director Tel: (961-1) 350-349. Cell: (961-3) 715-915 Email: jalal@act.com.lb www.act.com.lb |
| Banque Audi | Toufic Arida, Senior Analyst, Product Development Tel: (961-1) 977-339. Email: |

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| | <p>toufic.arida@audi.com.lb</p> <p>Marthe Nawar, Product Officer, Retail Banking</p> <p>Tel: (961-1) 977-461. Email: marthe.nawar@audi.com.lb</p> |
| Business Software Allicance (PCA Member) | <p>Aly Harakeh, BSA Representative</p> <p>Tel: (961-1) 983-344. Email: alyh@microsoft.com</p> |
| CISCO Systems (AmCham Member) | <p>Lama Kabbani, Marcom Specialist Levant & N. Africa</p> <p>Tel: (961-1) 977-009. Cell: (961-3) 886-388</p> <p>Email: lkabbani@cisco.com</p> |
| Connectsus Consulting (AmCham Member) | <p>Kamal Shehadi, CEO</p> <p>Cell: (961-3) 362-200. Email: kshehadi@dm.net.lb</p> |
| Cooperative Housing Foundation - CHF | <p>Ayman Abdallah, Chief of Party</p> <p>Nada Nassar, Assistant Project Manager</p> <p>Ghazi Issa, Computer Engineer</p> <p>Tel: (961-1) 853-263</p> <p>Cell Ayman: (961-3) 290-117</p> <p>Cell Ghazi: (961-3) 368-092</p> <p>cdl@cyberia.net.lb</p> |
| Council of Ministers - Office of the Prime Minister | <p>Fadi Fawaz, Office of the President of the Council of Ministers</p> <p>Tel: (961-1) 861-442. Email: ffawaz@dm.net.lb</p> <p>Ghassan Tannous, Assistant to Mr. Fawaz</p> <p>Email: ghassantannous@lynx.net.lb</p> <p>Hiba Tabbara, IT Developer</p> <p>Tel: (961-1) 981-167. Email: hibat@hotmail.com</p> |
| Damour Municipality (PCA Member) | <p>Antoine Ghafari, President of the Municipality</p> <p>Tel: (961-5) 600-928 or 600-930. Cell: (961-3) 820-402</p> |
| FiberLink Networks - (AmCham Member) | <p>Imad Tarabay, Chairman and CEO</p> <p>Tel: (961-1) 799-996. Cell: (961-3) 607-686</p> <p>Email: yamouts@fiberlinknetworks.net</p> <p>www.fiberlinknetworks.net</p> |
| Fondation Saradar | <p>Tania Helou, General Manager</p> <p>Tel: (961-1) 339-012. Email: fondation@saradar.org</p> <p>fondation.saradar.org</p> |
| Formatech Computer Training Center | <p>Rania Mansour, Marketing & Sales Manager</p> <p>Tel: (961-4) 415-840. Email: raniem@formatechedu.com</p> <p>Rabih Haider, Branch Coordinator</p> <p>Tel: (961-4) 415-840. Email: rabihh@formatechedu.com</p> <p>www.formatechedu.com</p> |
| Hiperdist (PCA Member) | <p>Antoine Kawkabany, GM</p> |

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| (Covers HP and CIS Group) | Tel: (961-4) 405-413. Cell: (961-3) 610-031. Email: tony_kawkabany@cis.com.lb |
| Information International Research | Zeina Akar Adra, Executive Director Jawad Adra, Managing Partner Tel: (961-1) 983-008/9. Cell: (961-3) 262-376 Email: infointl@information-international.com www.information-international.com |
| Information Technology Group - ITG (PCA Member) | Claude Bahsali, VP Cell: (961-3) 273-700. Email: c.bahsali@mdsl.com.lb www.itg.com.lb |
| International Computer and Communication - ICC (PCA Member) | Hashem Hashem, General Manager Tel: (961-1) 785-335. Email: hashem.hashem@icc.com.lb |
| Internet Facilities Group (PCA Member) | Michel Kilzi, COO Tel: (961-1) 999-923/4/5. Email: michel@ifsal.com www.internet-facilities.com |
| Investment Development Authority of Lebanon - IDAL | Samih Barbir, Chairman - Managing Director Tel: (961-1) 983-306/7/8/9. Email: samih.barbir@idal.com.lb Maroun Chammas, Member of the Board Tel: (961-1) 983-306/7/8/9. Email: maroun.chammas@idal.com.lb |
| Kfeir Community Information Center | Joseph Kassab Cell: (961-3) 714-547 |
| Lebanese Association for Studies and Training - Baalbeck | Mohamed Aleet Cell: (961-3) 776-341 |
| LibanCell (Baalbeck Community Information Kiosk Member) | Ali Fafai, Switching/VAS Chief Engineer Cell: (961-3) 792-337. Email: arifai@libancell.com.lb |
| LibanCell (PCA Member) | Amine Mardam Bey, Information Systems Dept Manager Cell: (961-3) 673-399 or 792-798. Email: amardam@libancell.com.lb |
| Logicom | Michael Papaeracleous, General Manager Tel: (961-1) 396-963. Email: mpapaeracleous@logicom-me.net |
| Mercy Corps | Suhail Kurban, Country Director Nora Bazy, Regional Coordinator Middle East Tel: (961-1) 611-586. Email: mci@sodetel.net.lb www.mercycorps.org |
| Microsoft Lebanon | Aly Harakeh, PR Manager Tel: (961-1) 983-344. Email: alyh@microsoft.com Khalil Abdel Massih, Enterprise Group |

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| | Manager Tel: (961-1) 983-344. Email: khalilam@microsoft.com |
| New Horizon Computer Learning Center | Edouard Baaklini, General Manager Tel: (961-1) 893-311. Email: edouardb@newhorizons.com.lb Elie Baaklini, Sales Manager Tel: (961-1) 893-311. Email: elieb@newhorizons.com.lb www.newhorizons.com |

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| Office of the Minister of State for Administrative Refrm (OMSAR) | Raymond Khoury, Director of Technical Unit Tel: (961-1) 371-510 ext 113/114. Email: rnkhoury@omsar.gov.lb www.omsar.gov.lb |
| Pontifical Mission | Issam Bishara, Regional Director Rabih Saba, Projects Manager Tel: (961-4) 714-901/ 902/ 903/ 904. Email: pontim@inco.com.lb |
| PriceWaterhouseCoopers (AmCham Member) | Ayman Haddad, Partner Cell: (961-3) 813-055. Email: ayman.r.haddad@lb.pwcglobal.com |
| Professional Computer Association (some members listed under their companies and PCA member listed in parenthesis) | Jalal Fawaz, President Nizar Zakka, Member of the Board Gabriel Deek, Member of the Board Hashem Hashem, Secretary General Aly Harakeh, Member Ibrahim Oueidat, Member Antoine Ghafari, Member Claude Bahsali, Member Amine Mardam Bey, Member Tel: (961-1) 970-700 or 350-349 Email: jalal@act.com.lb Email: nzakka@pca.org.lb Email: gdeek@pca.org.lb Email: hhashem@pca.org.lb Email: ioueidat@pca.org.lb Email: aghafari@pca.org.lb Email: cbahsali@pca.org.lb Email: amardam@pca.org.lb www.pca.org.lb |
| Software Design | Michel Nseir, General Manager Tel: (961-1) 399-855. Cell: (961-3) 605-386. Email: mnseir@softwaredesign.com.lb www.softwaredesign.com.lb |
| SUNY – Albany | Mahmoud Batlouni, Project Director Tel: (961-1) 856-736 or 737. Email: batlouni@suny-cld.edu.lb |
| USAID | Raouf Youssef, Mission Director Zeina Farhat, ICT Coordinator Ghassan Jamous, Program Assistance Specialist Tel: (961-4) 543-600 Email: youssefrn@state.gov Email: farhatzn@state.gov Email: jamousgw@state.gov |

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| US Embassy | Jim McCracken, Economic/Commercial Officer Tel: (961-4) 544-868. Email: mccrackenje@state.gov Rouba Chalabi, Commercial Assistant Tel: (961-4) 542-600 ext 487 Cell: (961-3) 787-819. Email: chalabirm@state.gov |
| Walid Nasser & Associates (Amcham Member) | Walid Nasser, Attorney at Law (including IPR specialist) Cell: (961-3) 555-001. Email: walid_nasser@hotmail.com |
| YMCA | Ghassan Sayah, CEO Tel Ghassan: (961-1) 490-640. Email: ghass@ymca-leb.org.lb Joe Awad Cell Joe: (961-3) 302-096 Leyla Mbayed, Director Integrated Rural Development Program Cell Leyla: (961-3) 789-666 Email General: ymca@ymca-leb.org.lb |

| Annex A.2: Lebanese Delegation to MENA Telecom Policy Reform Workshop held in Rabat April 2002 | |
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| Organization | Contact |
| Ministry of Telecommunications | Ahmad Oueidat , Director-General of Operation & Maintenance Tel: (961-1) 979-899. Email: mpt_abo@mpt.gov.lb |
| OGERO Telecom | Hassan Ibrahim , Director of Investment Cell: (961-3) 878-006. Email: exploit@ogero.gov.lb |
| Professional Computer Association | Jalal Fawaz , President Tel: (961-1) 350-349. Email: jalal@act.com.lb |
| AbouSleiman & Partners Law Office | Tarek Mogharbel , Lawyer, member of the team advising Lebanon's Higher Council for Privatization Tel: (961-1) 987-733. Email: tmogharbel@hotmail.com |
| Alem & Associates Law Firm | Mohamed Alem , Senior Legal Council to Ministry of Telecom Tel: (961-1) 818-191. Email: malem@alemlaw.com |
| American University of Beirut | Nabil Bukhalid , Director of Computing and Network Services Tel: (961-1) 744-473. Email: nabil@aub.edu.lb |
| Lebanese American University | Salpie Djoundourian , Assistant Professor, School of Business Tel: (961-9) 547-254 ext 2349. Email: sdjndran@lau.edu.lb |
| US Embassy | Elizabeth Fritschle , Economic and Commercial Officer Tel: (961-4) 544-868. Email: fritschleea@state.gov |

| Annex A.3: Lebanese Contacts from March 01 TDY | |
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| Organization | Contact |
| American Lebanese Chamber of Commerce | Salim Zeenni, President Me Ahdallah Basbous, Legal Advisor Marie Kortbawi, Office Manager 1153 Foch Street, Beirut Central District Tel: (961-1) 985-330 Fax: (961-1) 985-331 amchamlb@cyberia.net.lb |
| American University Beirut | Peter Heath, Provost Khalil Bitar, Dean, FAS Nabil Bukhalid, Manager Personal Computer Florence Eid, Business School Ayman Kayassi, Assoc. Professor Electrical and Computer Engineering – Multimedia Center Tel Peter: (961-1) 347-127 ext 2510 or 11 Tel Khalil: (961-1) 340-599 Tel Nabil: (961-1) 744-473 Tel Ayman: (961-1) 374-374 ext 3435 Cell Florence: (961-3) 686-824 pheath@aub.edu.lb kmb@aub.edu.lb nabil@aub.edu.lb feid@alum.mit.edu ayman@aub.edu.lb www.aub.edu.lb |
| Automation and Computer Technology (ACT) | Jalal Fawaz, Managing Director Commodore Center, 7 th Floor, Hamra Tel: (961-1) 350-349 Fax: (961-1) 345-549 jalal@act.com.lb www.act.com.lb |
| CISCO Systems | Mohamad Abdul-Malak, Country Manager The Atrium, Plot no. 1455, 3 rd Floor, Nijmeh, Beirut 2011-4120 PO Box 16-5480 Tel: (961-1) 985-515 Fax: (961-1) 985-517 Cell: (961-3)882-227 mmalak@cisco.com |
| Computer Information Systems (HP Rep) | Antoine Kawkabany, Deputy General Manager Jal-EI-Dib, Old Tripoli Road, CIS Building Tel: (961-4) 405-413 or 406-224 Fax: (961-4) 525-181 |

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| | Cell: (961-3) 610-321 tony_kawkabany@cis.com.lb www.cis.com.lb |
| Connectsus Consulting | Kamal Shehadi, CEO Cell: (961-3) 362-200 |

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| Cooperative Housing Foundation | Talal Hajj, Project Manager Ghazi Issa, Computer Engineer Jnah – Adnan Al Hakim Street, Al-Mobarak Building, 3 rd Floor, Beirut Tel: (961-1) 853-263 Fax: (961-1) 853-262 Cell: (961-3) 368-092 cdl@cyberia.net.lb |
| Coperon Technologies | Elias Tabet, CTO Cell: (961-3) 737-848 etabet@coperon.com |
| Creative Associates | Fadi Riachi, Director Tel: (961-4) 717-501 |
| Data Management | Maroun Chammas, Managing Director Borj al Ghazal Building, Fouad Chehab Avenue, Tabaris, Beirut Tel: (961-1) 204-635 ext 110 Fax: (961-1) 218-889 mnc@dm.net.lb www.dm.net.lb |
| EduWare | Khaled Raouda, Assistant General Manager Khaled Al-Sharif, Asst. General Manager Madame Currie Street, Rida Mrouwe Bldg, 5 th Fl. Tel: (961-1) 788-191 Fax: (961-1) 788-192 Cell Al Sharif: (961-3) 634-040 kraouda@eduware.net ksharif@eduware.net www.eduware.net |
| Embassy of Japan | Nobuhiro MATSUOKA, First Secretary Yukinobu MIYAKODA, Economic Attaché Tel: (961-5) 922-001/2 Fax: (961-5) 922-003 |
| FiberLink Networks | Imad Tarabay, Chairman and CEO Salah Yamout, Operations & Planning Manager Australia Street, Sakhra Building, 1st Floor Raouche, Beirut Tel: (961-1) 799 996 ext. 130 Fax: (961-1) 792-811 yamouts@fiberlinknetworks.net www.fiberlinknetworks.net |
| First Tuesday | Joyce El Khouri Tel: (961-1) 339-787 Fax: (961-1) 217-567 Cell: (961-3) 715-818 |

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| | joyce@firsttuesday.com www.firsttuesday.com |
| FORWARD Project | Peter Reiss, Project Director Tel: (301) 718-8259 peter_reiss@dai.com |
| Global Com Data Services | Ibrahim Ibrahim, Executive Director Jisr El Basha Main Street, Beirut Tel: (961-1) 512-513 Fax: (961-1) 510-474 Cell: (961-3) 370-670 ibi@inco.com.lb |
| IncoNet | Ms. Mahassen Ajam, Executive Director Tel: (961-3) 882-992 maa@inco.com.lb |
| InfoPro | Ramzi El Hafez, General Manager Imad Bashour, Research Manager Emile Edde Street, Salem Building, 2 nd Floor Tel: (961-1) 739-777 Fax: (961-1) 749-090 Ramzi email: opportunities@infopro.com.lb Imad email: research@infopro.com.lb |
| Lebanese American University | Georges Nicolas, Executive Director Abdallah Sfeir, Dean School of Engineering Tel: (961-9) 547-254/262 Fax: (961-9) 546-008 Cell Georges: (961-1) 786-456 Cell Abdallah: (961-1) 867-620 gnicolas@lau.edu.lb asfeir@lau.edu.lb |
| Liban Cables | Joseph Abiad, Marketing and Sales Manager Tel: (961-1) 350-040 Fax: (961-1) 350-042 |
| Libatel (Lucent Distributors) | Pierre Debahy, Vice-President Debahy Center, Sin El Fil Tel: (961-1) 485-160/165 Fax: (961-1) 485-172 Cell: (961-3) 290-290 pdebah@libatel.com (no y in email) |
| Logos (Oracle Distributors) | Wadih Jureidini, Consultant Tel: (961-1) 744-285 and 86 flogos@inco.com.lb |
| Mega Power Cybercafe | Elie Abou Jaoude, General Manager Jal El Bid, Lebanese University Street Cell: (961-3) 511-881 |

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| | aboujaoudeelie@hotmail.com www.megapower.web.com |
| Microsoft | Charbel Fakhoury, Regional Country Manager Tel: (961-1) 983-344 Fax: (961-1) 983-349 charbelf@microsoft.com |

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| Ministry of Finance | Nabil Yamout, Advisor to the Minister for IT nabily@future.com.lb nabil_yamout@hotmail.com |
| Ministry of Posts and Telecommunications | Dimianos Kattar, Advisor to the Minister Cell: (961-3) 660-664 |
| Netakeoff | Wissam Solh, CEO Tel: (961-1) 701-336 Fax: (961-1) 818-755 Cell: (961-3) 629-425 wsolh@netakeoff.com www.netakeoff.com |
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| Pontifical Mission/CNEWA | Issam Bishara Tel: (961-4) 714-901/ 902/ 903/ 904 Fax: (961-4) 714-905 pontius@inco.com.lb |
| PriceWaterhouseCoopers | Ayman Haddad, Partner SNA Building, Tabaris, Riad El Solh, Beirut, 1107-2050 Tel: (961-1) 203-420 Fax: (961-1) 203-419 ayman.r.haddad@lb.pwcglobal.com |
| Sarkis Consulting | Ronald Sarkis, Jurist and Economist Bakhos Building, Amine Mouchrik, Street 25, Sioufi Tel: (961-1) 217-129 or 334-207 Fax: (961-1) 218-526 or 217-130 |

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| SUNY – Albany | Mahmoud Batlouni, Project Director Al-Moubarak Building, 1 st Fl, Adnan El-Hakim, St. Jinah, Beirut Tel: (961-1) 856-736 or 737 Fax: (961-1) 856-738 batlouni@suny-cld.edu.lb |
| Terranet | Suheil Zurub, General Manager Nassar Center, 5 th Floor, Medawar, Beirut Tel: (961-1) 577-511 Fax: (961-1) 577-533 szurub@terra.net.lb www.terra.net.lb |
| TriNec | Sameer Hanna, CEO Nadim Ghorayeb, Chief Operating Officer 286A, Al-Maarad Street, Beirut Tel: (961-1) 989-595 Fax: (961-1) 989-966 ssh@trinet.net ng@trinec.net www.trinec.net |
| UNI Lebanon (Unisys Rep) | Jean-Claude Sacy, General Manager Tel: (961-1) 612-036 Fax: (961-1) 612-089 unileb@sodetel.net.lb |
| USAID | Jon Breslar, Mission Director Tel: (961-4) 543-600 Fax: (961-4) 544-254 Cell: (961-3) 331-276 usaidbeirut@t-net.com.lb |
| US Embassy | Rouba Chalabi, Commercial Assistant Tel: (961-4) 542-600 ext 487 Fax: (961-4) 544-794 Cell: (961-3) 787-819 chalabirm@state.gov |
| YMCA | Leyla Mbayed, Director Integrated Rural Development Program Delta Center, 3 rd Floor, Horst Tabet, Sin el-Fil Tel: (961-1) 490-640 or 490-685 |

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